

Applicants: Albert C. Pierce et al.
Application No.: 10/790,507

REMARKS

Claims 1-12, 14-16, 19, 20, 24-39 and 42-46 are pending in the application. Claims 13, 17, 18, and 21-23 have been canceled without prejudice. Claims 1, 3, 6, 7, 10, 14-16, 19, 39, 42, 43, and 46 have been amended. Support for the claim amendments can be found throughout the application as originally filed, including the claims. Importantly, no new matter has been added. Applicants reserve the right to pursue the canceled and amended subject matter in a continuing application under 35 U.S.C. § 120 or 121.

Rejections Under 35 U.S.C. § 101

Claims 1-39 and 42-46 stand rejected under 35 U.S.C. § 101 based on the Examiner's contention that they are directed to non-statutory subject matter. Applicants respectfully disagree with this rejection.

The Examiner maintains the 35 U.S.C. § 101 rejection of claims 1-39 and 42-46 based on the contention that the present invention is distinguishable from the invention of *In re Abele* because in *In re Abele* the data represented physical and tangible objects and the data in the present invention does not. As the Examiner stated in the final Office Action dated July 22, 2009:

“In the case of *Abele*, where a dependent claim is held patent eligible, the court in *In re Bilski* states that the ‘data clearly represented physical and tangible objects, namely the structure of bones, organs and other body tissues. Thus the transformation of that raw data into a particular visual depiction of a physical object on a display was sufficient to render that more narrowly-claimed process patent-eligible.’ See *In re Bilski*, 88USPQ2d 1397.”

The Examiner further states that “[i]n the instant case, however, even though the data source may be from X-ray, NMR, etc., the raw data were not transformed into a particular visual depiction of a physical object on a display to render the claims patent eligible.” Applicants

respectfully disagree with the contention that in the instant case the raw data is not transformed into a particular visual depiction of a physical object on a display. Firstly, displaying the resulting proteins and ligands is very much part of the instant invention, see step 5) of claim 1. Secondly, Applicants submit that proteins and ligands are physical objects, no different than bones, organs and other body tissue, just smaller.

Because the instant invention does result in the transformation of raw data into a display of a physical object, Applicants submit that claims 1-39 and 42-46 constitute patent-eligible subject matter in accordance with both *In re Abele* and *In re Bilski*, and request the withdrawal of these rejections under 35 U.S.C. § 101.

Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-39 and 42, 43, 45, and 46 stand rejected under 35 U.S.C. § 112, second paragraph, based on the Examiner's contention that they fail to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Examiner contends that the term "homologous" is a relative term that renders the claims indefinite. Applicants respectfully disagree with this rejection.

Claims 1, 3, 6, 7, 10, 14, 15, 16, 19, 39, 42, 43, and 46 have been amended to limit the macromolecule to proteins and "homologous" is defined for proteins as *amino acid* homology having structural features of 25% or greater, and for ligands as having at least 4-6 atoms in common. Support for these amendments can be found, for example, on page 3, lines 18-20, and page 18, lines 22-24, of the specification. Claims 13, 17, 18, and 21-23 have been canceled without prejudice to avoid redundancy.

Applicants submit that the claims as amended are definite and request the withdrawal of the rejection of claims 1-39 and 42, 43, 45, and 46 under 35 U.S.C. § 112, second paragraph.

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Fees

The Director is hereby authorized to charge any additional fee due, or credit any overpayment, in connection with this petition, to Deposit Account No. 50-0725.

Conclusion

Applicants request that the Examiner enter the above amendments, and allow the pending claims to pass to issue. If a call to Applicants' representative would help to expedite the prosecution of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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